

Abstract

A fuel injection valve for internal combustion engines, having a valve body (1)
5 in which a bore (5) is embodied that is defined in its end toward the combustion
chamber by a valve seat (18), in which a first row of injection openings (20) and a
second row of injection openings (22) are embodied. In the bore (5), an outer
valve needle (8) is located longitudinally displaceably and cooperates with the
valve seat (18) for controlling the first row of injection openings (20); between the
10 outer valve needle (8) and the wall of the bore (5), a pressure chamber (14) is
embodied that can be filled with fuel at high pressure. In the outer valve needle
(8), an inner bore (11) is embodied, in which an inner valve needle (10) is
longitudinally displaceably located and which cooperates with the valve seat (18)
for controlling the second row of injection openings (22). Embodied on the inner
15 valve needle (10) is a pressure shoulder (30), by way of which upon subjection to
pressure a hydraulic opening force is exerted on the inner valve needle (10); by its
opening stroke motion, the outer valve needle (8) opens a throttle connection (32)
from the pressure chamber (14) to the pressure shoulder (30) of the inner valve
needle (10) (Fig. 2).